CHAPTER 5

PUMPING STATIONS FOR FIRE PROTECTION WATER SUPPLY

5-1. General provisions. All pump installations (pumps, pump house or pump room, controls, piping) to be used in fire protection service will meet the requirements of NFPA 20.

5-2. Pump type. A fire pump may be either a horizontal or vertical shaft centrifugal pump or a vertical shaft turbine pump, whichever is most economical and appropriate for the intended use. A vertical shaft turbine pump type only will be used for suction lift.

5-3. Pump size. Fire pumps are to be sized to provide the required fire flow demand at not more than 150 percent of the rated pump capacity. The benefit/cost relationship of using multiple pumps, arranged to start sequentially on system pressure drop, (in lieu of a single pump) to provide the total required fire flow demand should be investigated.

5-4. Pump starting arrangement. Fire pumps must be arranged to start automatically except that they may be arranged for manual starting when other available water supply sources are capable of providing the demands for all automatic sprinkler and special fire suppression systems simultaneously with the domestic/industrial demands. All fire pumps require manual shutdown after starting. Automatic shutdown is not permitted except on complete consumption of reservoir water.

5-5. Pump drive. When electric power is economically available from a reliable single power source or from two independent sources in accordance with NFPA 20, fire pumps will be electric motor-driven only. When such electric power supplies are not available, fire pumps will be diesel engine-driven. Spark ignited internal combustion engines will not be used to drive fire pumps.